

Section 1. Registration Information

Source Identification

Facility Name:	Pyramid Peak Water Treatment Plant
Parent Company #1 Name:	City of Glendale
Parent Company #2 Name:	

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	5-year update (40 CFR 68.190(b)(1))
Description:	
Receipt Date:	29-Jun-2009
Postmark Date:	29-Jun-2009
Next Due Date:	29-Jun-2014
Completeness Check Date:	29-Jun-2009
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0010 6912
Other EPA Systems Facility ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	77523579
Parent Company #1 DUNS:	
Parent Company #2 DUNS:	

Facility Location Address

Street 1:	28101 N. 63rd Avenue
Street 2:	
City:	Glendale
State:	ARIZONA
ZIP:	85310
ZIP4:	
County:	MARICOPA

Facility Latitude and Longitude

Latitude (decimal):	33.738333
Longitude (decimal):	-112.190278
Lat/Long Method:	GPS - Unspecified
Lat/Long Description:	Center of Facility
Horizontal Accuracy Measure:	10
Horizontal Reference Datum Name:	World Geodetic System of 1984
Source Map Scale Number:	

Owner or Operator

Operator Name:	City of Glendale Utilities Dept.
Operator Phone:	(623) 930-4100

Mailing Address

Operator Street 1:	28101 N. 63rd Avenue
Operator Street 2:	
Operator City:	Glendale
Operator State:	ARIZONA
Operator ZIP:	85310
Operator ZIP4:	
Operator Foreign State or Province:	
Operator Foreign ZIP:	
Operator Foreign Country:	

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:	Rick Scott
RMP Title of Person or Position:	Superintendent of Plant Operations
RMP E-mail Address:	rscott@glendaleaz.com

Emergency Contact

Emergency Contact Name:	Ron Carpenter
Emergency Contact Title:	Plant Operations Supervisor
Emergency Contact Phone:	(623) 930-3871
Emergency Contact 24-Hour Phone:	(623) 293-2355
Emergency Contact Ext. or PIN:	
Emergency Contact E-mail Address:	rcarpenter@glendaleaz.com

Other Points of Contact

Facility or Parent Company E-mail Address:	
Facility Public Contact Phone:	(623) 930-3903
Facility or Parent Company WWW Homepage Address:	www.glendaleaz.com

Local Emergency Planning Committee

LEPC:	Maricopa County LEPC
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Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:	16
FTE Claimed as CBI:	

Covered By

OSHA PSM :	Yes
EPCRA 302 :	
CAA Title V:	
Air Operating Permit ID:	

OSHA Ranking

OSHA Star or Merit Ranking:

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	26-Mar-2009
Last Safety Inspection Performed By an External Agency:	Fire Department

Predictive Filing

Did this RMP involve predictive filing?:

Preparer Information

Preparer Name:
Preparer Phone:
Preparer Street 1:
Preparer Street 2:
Preparer City:
Preparer State:
Preparer ZIP:
Preparer ZIP4:
Preparer Foreign State:
Preparer Foreign Country:
Preparer Foreign ZIP:

Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidents reported for this RMP.
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Process Chemicals

Process ID:	1000010800
Description:	
Process Chemical ID:	1000012301
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	20000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process NAICS

Process ID:	1000010800
Process NAICS ID:	1000011176
Program Level:	Program Level 3 process
NAICS Code:	22131
NAICS Description:	Water Supply and Irrigation Systems

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000009137

Percent Weight:	
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	shooting range

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000010016

Percent Weight:	
Physical State:	Gas liquified by pressure
Model Used:	EPA's RMP*Comp(TM)
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	A
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	Yes
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	Yes
Emergency Shutdown:	Yes
Other Type:	

Section 4. Flammables: Worst Case

No records found.

Section 5. Flammables: Alternative Release

No records found.

Section 6. Accident History

No records found.

Section 7. Program Level 3

Description

No description available.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000010213
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Prevention Program Level 3 ID:	1000008813
NAICS Code:	22131

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	10-Jun-2009
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Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	10-Jun-2009
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The Technique Used

What If:	Yes
Checklist:	
What If/Checklist:	
HAZOP:	
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	10-Jun-2009

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	
Corrosion:	
Overfilling:	
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	
Earthquake:	
Floods (Flood Plain):	

Tornado:
Hurricanes:
Other Major Hazard Identified:

Process Controls in Use

Vents:
Relief Valves:
Check Valves: Yes
Scrubbers: Yes
Flares:
Manual Shutoffs: Yes
Automatic Shutoffs: Yes
Interlocks:
Alarms and Procedures: Yes
Keyed Bypass:
Emergency Air Supply:
Emergency Power: Yes
Backup Pump:
Grounding Equipment:
Inhibitor Addition:
Rupture Disks:
Excess Flow Device:
Quench System:
Purge System:
None:
Other Process Control in Use:

Mitigation Systems in Use

Sprinkler System:
Dikes:
Fire Walls:
Blast Walls:
Deluge System:
Water Curtain:
Enclosure: Yes
Neutralization: Yes
None:
Other Mitigation System in Use:

Monitoring/Detection Systems in Use

Process Area Detectors: Yes
Perimeter Monitors: Yes
None:
Other Monitoring/Detection System in Use:

Changes Since Last PHA Update

Reduction in Chemical Inventory:
Increase in Chemical Inventory:
Change Process Parameters:
Installation of Process Controls:
Installation of Process Detection Systems:

Installation of Perimeter Monitoring Systems:
Installation of Mitigation Systems:
None Recommended: Yes
None:
Other Changes Since Last PHA or PHA Update:

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures): 10-Jun-2009

Training

Training Revision Date (The date of the most recent review or revision of training programs): 10-Jun-2009

The Type of Training Provided

Classroom: Yes
On the Job: Yes
Other Training:

The Type of Competency Testing Used

Written Tests: Yes
Oral Tests:
Demonstration: Yes
Observation: Yes
Other Type of Competency Testing Used:

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): 10-Jun-2009

Equipment Inspection Date (The date of the most recent equipment inspection or test): 01-Jun-2009

Equipment Tested (Equipment most recently inspected or tested): scrubber, chlorine monitors

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures): 01-Jun-1998

Change Management Revision Date (The date of the most recent review or revision of management of change procedures): 10-Jun-2009

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review): 01-Jun-1998

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit): 10-Jun-2009

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): 10-Jun-2009

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)): 14-Mar-1999

Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation): 01-Apr-1999

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): 10-Jun-2009

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): 10-Jun-2009

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): 10-Jun-2009

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance): 10-Jun-2009

Confidential Business Information

CBI Claimed:

Section 8. Program Level 2

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?): Yes

Facility Plan (Does facility have its own written emergency response plan?): Yes

Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?): Yes

Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?): Yes

Healthcare (Does facility's ER plan include information on emergency health care?): Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan): 21-Feb-2008

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees): 03-Sep-2008

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated): Glendale and Phoenix Fire Dept.

Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated): (623) 930-3400

Subject to

OSHA Regulations at 29 CFR 1910.38: Yes

OSHA Regulations at 29 CFR 1910.120: Yes

Clean Water Regulations at 40 CFR 112: Yes

RCRA Regulations at CFR 264, 265, and 279.52:

OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:

State EPCRA Rules or Laws: Yes

Other (Specify): OSHA Regulations at 29 CFR 1910.119 and 1910.110

Executive Summary

Executive Summary

This document is an update to the Pyramid Peak Water Treatment Plant (PPWTP) Risk Management Program (RMP) that was submitted to U.S. EPA in May 1999. In accordance with RMP guidance documents and regulations, all administrative and operational changes at the facility since 1999 are documented.

In June 1996, the U.S. Environmental Protection Agency (EPA) issued Risk Management (RM) program regulations (40 CFR, Part 68). Regulated under the Clean Air Act Amendments (CAAA), Section 112(r), the RMP requires facilities that store large amounts of listed hazardous chemical substances to prepare and implement risk management plans to reduce the probability of accidental releases and minimize the health risks to the public and the environment.

The RMP regulates 77 listed toxic substances and 63 listed flammable substances. Of the 140 toxic and flammable chemicals regulated by the RMP, the PPWTP has only one such listed chemical, anhydrous chlorine, which is used to disinfect drinking water provided to the residents of Glendale. The terms anhydrous chlorine and chlorine are used interchangeably and specifically refer to a chemical listed in the RMP regulations. When used as a disinfectant, chlorine prevents the spread of waterborne diseases and has been used for years in the water treatment industry. When properly used, chlorine has proven to be both safe and effective.

In addition to the PPWTP, the RMP regulations apply to an estimated 7,200 public and private drinking water and wastewater treatment facilities nationwide where chlorine and/or ammonia are used as disinfectants. As with other facilities across the U.S., the City of Glendale views the RMP as a vehicle to communicate emergency response procedures to the public and emergency planning agencies.

Minimizing Risk

The major driving force in the development of the RMP regulations is reducing the risk to public health by minimizing the potential of a chemical release. At PPWTP, there is a multi-layer system in place to meet this goal. The RMP includes the following: (1) properly trained operators to safely handle chlorine; (2) chlorine detectors located where chlorine is stored and/or used; (3) failsafe equipment design and installation of back-up safety equipment including emergency scrubbers; and (4) an automated warning system that notifies both on-site and off-site personnel of a potential release. Trained personnel respond to chlorine alarms to assess whether a chlorine release poses an imminent danger to employees or the public. While a significant release is unlikely, emergency response plans have been developed for just such an occurrence. The emergency response plans include procedures to be followed by operators trained to take appropriate action including contacting the Glendale Fire Department (GFD). The GFD's emergency response time to the PPWTP is 10 minutes.

Management Plan

Within the management and administrative roles of the PPWTP, responsibility has been defined to coordinate and implement the RMP. Overall development and management of the RMP is the responsibility of the RMP Manager. The RMP Coordinator reports to the RMP Manager and is responsible for coordinating the implementation of the RMP. The PPWTP Safety Administrator is responsible for the overall recordkeeping of the RMP (and assisting the RMP Coordinator). The Chief Plant Operator is responsible for the day-to-day implementation of the RMP and reports to the RMP Manager. Additional program oversight is provided by the City of Glendale's Environmental Resource Administrator and Employee Safety Manager who act as external auditors of the program's implementation and overall quality.

For the PPWTP, the following personnel have been assigned to coordinate and implement the RMP:

• The Superintendent of Plant Operations is the designated RMP Manager

• The Safety & Security coordinator is the designated RMP Coordinator

The Safety and Security Coordinator is also the delegated coordinator for the Occupational Safety and Health Administration (OSHA) Process Safety Management (PSM) program in place at PPWTP. The requirements of the PSM program largely parallel RMP requirements. Because of the similarities in the two programs, the RMP Coordinator will be referred to as the RM/PSM Program Coordinator throughout this document.

Worst Case and Alternate Case Release Scenarios

PPWTP modeled two potential release events for chlorine and followed EPA guidance to identify a worst case release scenario (WCS) and alternate case release scenario (ACS) as defined by the EPA regulations. Toxic endpoints were identified using EPA-approved methods.

A worst case scenario is defined by the EPA as the result of a release from the largest container and/or pipe over a span of 10 minutes. The distance to a toxic endpoint is defined by emergency response planning guidelines level 2 (ERPG-2) as a concentration a person can be exposed to for up to 1 hour without experiencing serious health effects. The distance to a toxic endpoint is used to determine the affected geographical area and population for emergency planning purposes. The ERPG-2 value for chlorine is 3 parts per million by volume (ppmv).

EPA states that a WCS is useful for encouraging community dialogue. However, because the WCS does not necessarily represent events likely to occur, it is more useful for discussion purposes than for emergency planning purposes. An alternative release scenario is a release scenario more likely than the WCS and should be used for emergency response planning.

The WCS for the PPWTP is a release of 2,000 pounds of chlorine in 10 minutes. The distance to the toxic endpoint for the WCS is 2.25 miles, affecting approximately 16 square miles and an estimated population of 13,034.

The alternate case release scenario (ACS) for chlorine was evaluated for emergency response planning purposes. The ACS is based on an operator opening the chlorine container valve before connecting the flexible piping (pigtail) resulting in a release of gaseous chlorine. This ACS resulted in an endpoint distance of 0.53 miles. A population of approximately 499 in an area less than 1 square mile could potentially be affected if this scenario were to occur.

5-Year Accident History

Since PPWTP opened in 1986, there has not been a release resulting in off-site property damage or health consequences requiring medical treatment.

Chemical Release Prevention Program

The PPWTP has a chemical release prevention program in place for the chlorine process. This program is required by both the RMP and OSHA PSM regulations. The prevention program for the chlorine process has been in place since 1995. Key provisions of the PPWTP prevention program are as follows:

- Written procedures have been prepared for the covered process, including directions for safe start-up and shutdown operations and emergency shutdown.

- PPWTP employees who operate the chlorine system must receive training initially and periodically on safe start-up and shutdown operations and emergency shutdown.

- Incidences, including minor releases are investigated to improve the safety of the process.

- Once completed, incident investigations are shared with employees.

- Employees participate in a process hazard analysis (PHA) which identifies potential hazards and ways to improve the safety of the process every five years, or when significant changes are made to the process.

- The PPWTP has a management of change (MOC) program in place that mandates changes to the chlorine system are reviewed prior to the change to ensure that the change will not compromise safety.

- An equipment design and maintenance program is in place that assures mechanical integrity. Equipment design and maintenance practices are consistent with guidance provided by the Chlorine Safety Institute.

- A preliminary start-up review is also completed prior to returning the covered equipment to service after a major change or prior to a new covered process coming on-line.

⌘ A hot work permit program is in place.

⌘ Contractors who work on or near the RMP process are advised of the hazards of chlorine, provided evacuation instructions in case an incident occurs, and must certify that they are qualified to work near hazardous materials.

Emergency Response Program

The PPWTP has an emergency response program in place for the chlorine process. This program consists of personnel trained to recognize releases, assess the situation, and engage the proper emergency response personnel. When external emergency response is required, plant personnel will notify the GFD then establish an incident command system that is transferred to the GFD upon their arrival. Once GFD establishes command, it is supported by PPWTP personnel familiar with the affected process. The GFD has access to additional emergency response resources, including the City of Glendale Police Department, Red Cross, Arizona Department of Environmental Quality, and other agencies, as needed.

Improvements Since Last Report Submission

The PPWTP updated its Process Safety Management for chlorine based on the results of a June 2009 Revalidation process. The recent revalidation confirms that human error is the greatest potential hazard at PPWTP. After reviewing the processes and procedures within the Process Safety Management program, no changes were made other than minor contact information.